

IN THE CLAIMS

1. (Currently Amended) Helical antenna ~~(30, 70, 80, 90)~~ including at least one helix formed by at least two radiating wires ~~(31, 71, 81, 91)~~, ~~characterised in that~~wherein at least one of said radiating wires is associated with a parasitic wire ~~(34, 74, 84, 94)~~ narrower than or equal in width to said radiating wire(s) so as to broaden the bandwidth of the antenna.

2. (Currently Amended) Helical antenna according to claim 1, ~~characterised in that~~wherein each of said parasitic wires is connected to the ground ~~(35, 75, 85, 95)~~.

3. (Currently Amended) Helical antenna according to ~~either of~~ claims claim 1 and 2, ~~characterised in that~~wherein said radiating wires and said at least one parasitic wires are printed on a substrate ~~(32, 72, 82, 92)~~.

4. (Currently Amended) Helical antenna according to ~~any one of~~ claims claim 1 to 3, ~~characterised in that~~wherein each of said radiating wires is associated with a parasitic wire narrower than or equal in width to said radiating wire.

5. (Currently Amended) Helical antenna according to claim 4, ~~characterised in that~~wherein the ratio between the width of each of said parasitic wires and the width of said associated radiating wire is less than or equal to 0.15.

6. (Currently Amended) Helical antenna according to ~~any one of~~ claims claim 1 to 5, ~~characterised in that~~wherein each of said parasitic wires is positioned with respect to said associated radiating wire so as to optimise the coupling between said parasitic wire and said associated radiating wire.

7.(Currently Amended) Helical antenna according to ~~any one of~~
~~claims~~claim 1 ~~to 6~~, ~~characterised in that~~wherein each of said
parasitic wires is farther from said associated radiating wire
than from at least one of said other radiating wires.

8.(Currently Amended) Helical antenna according to ~~any one of~~
~~claims~~claim 1 ~~to 7~~, ~~characterised in that~~wherein each of said
parasitic wires is parallel to the radiating wire with which it
associated.

9.(Currently Amended) Helical antenna according to ~~any one of~~
~~claims~~claim 1 ~~to 8~~, ~~characterised in that~~wherein each of said
parasitic wires has substantially the same length as the
radiating wire with which it is associated.

10.(Currently Amended) Helical antenna according to ~~any one of~~
~~claims~~claim 1 ~~to 9~~, ~~characterised in that~~wherein one of the ends
of each of said radiating wires is connected by a conductive
connection ~~(36, 86, 96)~~ to one of the ends of said radiating wire
with which said parasitic wire is associated.

11.(Currently Amended) Helical antenna ~~(70)~~ according to ~~any one~~
~~of~~ ~~claims~~claim 1 ~~to 9~~, wherein one of the ends ~~(75)~~ of each of
said radiating wires is connected by coupling to one of the ends
of said radiating wire with which said parasitic wire is
associated.

12.(Currently Amended) Helical antenna according to claim 11,
~~characterised in that~~wherein said radiating wires are printed on
a first surface of a substrate and in that said parasitic wires
are printed on a second surface of said substrate.

13.(Currently Amended) Helical antenna according to claim 12,
~~characterised in that~~wherein at least one parasitic wire and one
radiating wire adjacent to said radiating wire with which said
parasitic wire is associated cross over one another.

14. Helical antenna according to ~~any one of claims~~claim 10 ~~to 13~~, characterised in that wherein the end of said radiating wires not connected to a parasitic wire is connected to a feedline of a power supply circuit ~~(33, 73, 83, 93)~~.

15. (Currently Amended) Helical antenna according to ~~any one of claims~~claim 1 ~~to 14~~, characterised in that wherein at least one of said helices is a quadrifilar helix, including four wires.

16. (Currently Amended) Helical antenna according to ~~any one of claims~~claim 1 ~~to 15~~, characterised in that wherein said radiating wires forming a helix are all the same size and ~~in that~~ said parasitic wires are all the same size.

17. (Currently Amended) Helical antenna ~~(90)~~ according to ~~any one of claims~~claim 1 ~~to 16~~, characterised in that wherein at least one of said radiating and/or parasitic wires is formed by at least two segments, in which the angles of wrap of at least two of said segments are different and determined randomly or pseudo-randomly using global optimisation means.

18. (Currently Amended) Helical antenna ~~(80)~~ according to ~~any one of claims~~claim 1 ~~to 17~~, characterised in that wherein at least one of said radiating and/or parasitic wires has a variable width, varying regularly and consistently between a maximum and a minimum width.

19. (Currently Amended) Helical antenna according to ~~any one of claims~~claim 1 ~~to 18~~, characterised in that wherein said radiating wires have a length substantially different from a multiple of the wavelength corresponding to the mean frequency of the transmission band of said antenna, divided by 4.